

SEQUENCE LISTING

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<210> Gene encoding caffeine synthesis system associated enzyme and use thereof

<130> 029430-454

<140> US 09/577,657

<141> 2000-05-25

<150> JP 146358/1999

<151> 1999-05-26

<160> 21

<170> PatentIn version 3.0

<210> 1

<211> 356

<212> PRT

<213> Camellia sinensis

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 20 25 30

Val Glu Thr Leu Phe Ser Arg Asp Phe His Leu Gln Ala Leu Asn Ala
 35 40 45

Ala Asp Leu Gly Cys Ala Ala Gly Pro Asn Thr Phe Ala Val Ile Ser
 50 55 60

Thr Ile Lys Arg Met Met Glu Lys Lys Cys Arg Glu Leu Asn Cys Gln
 65 70 75 80

Thr Leu Glu Leu Gln Val Tyr Leu Asn Asp Leu Phe Gly Asn Asp Phe
 85 90 95

Asn Thr Leu Phe Lys Gly Leu Ser Ser Glu Val Ile Gly Asn Lys Cys
 100 105 110

Glu Glu Val Pro Cys Tyr Val Met Gly Val Pro Gly Ser Phe His Gly
 115 120 125

Arg Leu Phe Pro Arg Asn Ser Leu His Leu Val His Ser Ser Tyr Ser
 130 135 140

Val His Trp Leu Thr Gln Ala Pro Lys Gly Leu Thr Ser Arg Glu Gly
 145 150 155 160
 Leu Ala Leu Asn Lys Gly Lys Ile Tyr Ile Ser Lys Thr Ser Pro Pro
 165 170 175
 Val Val Arg Glu Ala Tyr Leu Ser Gln Phe His Glu Asp Phe Thr Met
 180 185 190
 Phe Leu Asn Ala Arg Ser Gln Glu Val Val Pro Asn Gly Cys Met Val
 195 200 205
 Leu Ile Leu Arg Gly Arg Gln Cys Ser Asp Pro Ser Asp Met Gln Ser
 210 215 220
 Cys Phe Thr Trp Glu Leu Leu Ala Met Ala Ile Ala Glu Leu Val Ser
 225 230 235 240
 Gln Gly Leu Ile Asp Glu Asp Lys Leu Asp Thr Phe Asn Ile Pro Ser
 245 250 255
 Tyr Phe Ala Ser Leu Glu Glu Val Lys Asp Ile Val Glu Arg Asp Gly
 260 265 270
 Ser Phe Thr Ile Asp His Ile Glu Gly Phe Asp Leu Asp Ser Val Glu
 275 280 285
 Met Gln Glu Asn Asp Lys Trp Val Arg Gly Glu Lys Phe Thr Lys Val
 290 295 300
 Val Arg Ala Phe Thr Glu Pro Ile Ile Ser Asn Gln Phe Gly Pro Glu
 305 310 315 320
 Ile Met Asp Lys Leu Tyr Asp Lys Phe Thr His Ile Val Val Ser Asp
 325 330 335
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 340 345 350
 Lys Ile Asp Gly
 355

<210> 2

<211> 1427

<212> DNA

<213> *Camellia sinensis*

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 aaagtagtta tgcacaaaac tcttctttca cgcaacaagt ggctcaatg gcacagccag 180
 cgctagaaaa tgcagttgaa actctcttct ccagagattt ccaccttcaa gctcttaacg 240

cagcggactt gggttgtgca gcgggtccaa acacattcgc agtgatttct acgatcaaga 300
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 tgaatgatct ttttggaat gatttcaata cctcttcaa aggcctgtcg tctgaggta 420
 ttggtaacaa atgtgaggaa gttccgtgtt atgtgatggg agtaccgggg tctttccatg 480
 gccggctttt tctcgtaac agcttacatt tagttcattc ctcttacagt gttcattggc 540
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 ttacatatac aaagacaagc cctcctgttg taagagaagc ctacttatct caatttcatg 660
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 tggagagggg cggatcattc acaattgatc atatagaggg gtttgatctt gatagcgtag 960
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 aattcactca cattgtagtt tcagatttgg aagcaaagct accgaagacc acaagtatca 1140
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 ctatcacata tatgccacta gagggttgtg ccaatgtatt gcacaagaag atttgagagg 1260
 ggtcaaatat agaaagcatt ttgctcttgt gtggagagag aatgttttct tgattttaat 1320
 ctgtgatacc caaatcgtaa tgttgggaag aaatgagaag ttgaacatga aatttttaaa 1380
 aaaaaaaaaa aaaaaaaaaa aaaaaaaatt cctgcggccg cgaattc 1427

<210> 3

<211> 1427

<212> RNA

<213> *Camellia sinensis*

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 aaaguaguua ugcacaaaac ucuucuuuca cgcaacaagu ggccucaaug gcacagccag 180
 cgcuaaaaaa ugcaguugaa acucucuucu ccagagauuu ccaccucaa gcucuuaacg 240
 cagcggacuu gggguuguca gcggguccaa acacauucgc agugauuucu acgaucaaga 300

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gaaugaugga aaagaaaugc agggaauga auugccaaac acuggaacuu cagguuuacu 360
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uugguaacaa augugaggaa guuccguguu augugauggg aguaccgggg ucuuuccaug 480
gccggcuuuu uccucguaac agcuuacauu uaguucauuc cucuuacagu guucauuggc 540
uuacucaggc accaaaagga cucacaagca gagaaggcuu ggcauuaaac aaggggaaga 600
uuuacauauc aaagacaagc ccuccuguug uaagagaagc cuacuuauc cuuuuucag 660
aagauuucac aauguuucuc aaugcuagau cccaagaggu gguuccaaau gguuguaugg 720
uguugauacu ucgugguagg caauguucug auccuucaga caugcagagc ugcuuuacuu 780
gggaacuauu agcuauuggc auugcugaau ugguuucaca gggauugaua gaugaagaua 840
aauuagacac cuucaauua cccagcuauu uugcaucacu ugaggaagug aaagauauag 900
uggagagggg cggaucuuuc acaauugauc auauagaggg guuugaucuu gauagcguag 960
aaaugcagga gaugauaaa ugguuagag gggaaaagu uaccaagguu gucagggccu 1020
ucacagagcc uauauuuca aaccaguug gaccugaaau cauggacaaa cuauaugaca 1080
aaucacuca cauuguagu ucagauuug aagcaaagcu accgaagacc acaaguauca 1140
uccuagugcu uuccaagauu gauggauagu uuuuuagugu ugugaaaua acuguugucc 1200
cuauacaua uauccacua gaggguugug ccauguauu gcacaagaag auuugagagg 1260
ggucaauau agaaagcau uugcucuugu guggagagag aauguuuuc ugauuuuuu 1320
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aaaaaaaaa aaaaaaaaaa aaaaaaaaaa ccugcggccg cgaauuc 1427

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<210> 4

<211> 20

<212> PRT

<213> *Camellia sinensis*

<220>

<221> PEPTIDE

<222> (7)

<223> Amino acid at position 7 is Xaa wherein Xaa = other amino acid.

<400> 4

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Phe Met Asn Arg Gly Glu Xaa Glu Ser Ser Tyr Ala Gln Asn Ser Gln
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Phe Thr Gln Val
20

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<210> 5
 <211> 19
 <212> DNA
 <213> Camellia sinensis

<220>
 <221> misc_feature
 <222> (12)..(15)
 <223> Nucleotides 12 and 15 are "n" wherein "n" = i.

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<210> 6
 <211> 19
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 <213> Camellia sinensis

<400> 6
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<210> 7
 <211> 17
 <212> DNA
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<400> 7
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<210> 8
 <211> 20
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<400> 8
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<210> 9
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<400> 9
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gccaaacact ggaacttcag g 21

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<210> 12
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<210> 13
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<400> 13
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<210> 14
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<400> 14
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<210> 15
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<400> 17
 ggccctgtcgt ctgaggttat tg

22

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<400> 18
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<400> 20
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21

<210> 21
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 <213> Camellia sinensis

<400> 21
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21